

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number: 877-378-7745 (Canada)

Approval Date: January 3, 2007

Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 **Page: 1 of 10**

1. Product and Company Identification

Product Name: Phenol Solution
Synonyms: Hydrated Phenol

Supplier/Manufacturer:
INEOS Phenol
7770 Rangeline Rd.
Theodore, Alabama 36582
Daytime Phone: 251-443-3000

2. Composition/Information on Ingredients

Hazardous Ingredient(s)	CAS Number	% (Wt./Wt.)
Phenol	000108-95-2	85-95
Water	007732-18-5	5-15

See Section 8 for Exposure Guidelines

3. Hazards Identification

EMERGENCY OVERVIEW

Causes skin burns. Harmful if absorbed through the skin. Harmful if swallowed. Causes eye irritation. Causes respiratory tract irritation. Combustible liquid and vapor.

POTENTIAL HEALTH EFFECTS

Eye Contact:

May cause severe corneal damage and corrosion of eyes if not washed immediately and thoroughly. Immediately washing decreases the severity of ocular effects.

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number: 877-378-7745 (Canada)

Approval Date: January 3, 2007
Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 **Page: 2 of 10**

Skin Contact:

Liquid is readily absorbed through the skin and results in irritation and necrosis. Exposure may result in cardiac arrhythmias. Phenol vapors are readily absorbed through the skin.

Inhalation:

Severely irritating. Excessive Inhalation of vapors may cause nasal and respiratory irritation and central nervous system effects including dizziness, weakness, fatigue, headache, possible unconsciousness, and even death.

Ingestion:

Toxic. Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Subchronic/Chronic Hazards:

Repeated overexposure may cause damage to kidneys and liver.

4. First Aid Measures

FIRST AID

Eye Contact:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes or until all material has been removed. Obtain medical attention.

Skin Contact:

Flush skin with plenty of Polyethylene Glycol (PEG) or large quantities of water. Obtain medical attention if irritation develops or persists.

Inhalation:

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number 877-378-7745 (Canada)

Approval Date: January 3, 2007
Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 Page: 3 of 10

Ingestion:

If swallowed, get medical attention immediately. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person.

5. Fire Fighting Measures:

Flash Point: 221-230°F
Flash Point Method: Not available

Lower Explosive Limit: 1.7 vol % (phenol)
Upper Explosive Limit: 8.6 vol % (phenol)

OSHA Flammability Classification: Combustible Liquid
Autoignition Temperature: 716°C (phenol)

Other Flammable Properties:

Combustible liquid. Vapors can travel to a source of ignition and flash back.
Explosive mixtures may occur at temperatures at or above the flashpoint.

Extinguishing Media:

Use water spray or fog, alcohol resistant foam, dry chemical, or CO₂.

Fire Fighting Procedures:

Containers can build up pressure if exposed to heat (fire). Cool with water spray.
As in any fire, wear self-contained, pressure-demand breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.

6. Accidental Release Measures

Steps to be taken in case material is released or spilled:

Absorb spill with inert material, then place in a chemical waste container. After removal, flush contaminated area with water and collect for disposal. Clean up

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number: 877-378-7745 (Canada)

Approval Date: January 3, 2007

Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 Page: 4 of 10

spills immediately. Remove sources of ignition and ventilate area. Use a respirator and other protective equipment as outlined in Section 8. Obey relevant local, state, and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater, or soil.

7. Handling and Storage

Handling:

Keep away from heat. Keep away from sparks, flames, and other sources of ignition. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. The need for grounding and bonding of containers in accordance with OSHA 29 CFR 1910.106 and NFPA 77 should be assessed for all product transfers. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling.

Storage:

Store in a cool, dry place. Keep container closed when not in use.

8. Exposure Controls/Personal Protection

Exposure Limits

	Value	Limit	Reference
Phenol	5 ppm (skin)	TWA	OSHA/ACGIH
	15.6 ppm	STEL/REL	NIOSH

Other exposure limit information:

The phenol IDLH is 250 ppm.

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne exposure.

Respiratory Protection:

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number: 877-378-7745 (Canada)

Approval Date: January 3, 2007
Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 Page: 5 of 10

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Eye Protection:

Use chemical splash goggles.

Skin Protection:

Personal protective equipment to prevent dermal exposure is recommended.

Other Protective Equipment:

There is evidence that PEG 400 when used in conjunction with water may be more effective than water for decontaminating skin. Therefore, it is recommended PEG 400 be made available in areas where skin exposures to phenol are possible. A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

9. Physical and Chemical Properties

Vapor Pressure	:	5.0 mbar @ 20°C
Vapor Density (Air=1)	:	Is heavier than air
Specific Gravity	:	1.07
Boiling Point	:	182°C
Freezing Point	:	15°C
pH	:	4-5@20°C
Evaporation Rate	:	Not available
Solubility in Water	:	87.5g/l@25°C, Completely miscible @ 68°C

Other Properties:

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number: 877-378-7745 (Canada)

Approval Date: January 3, 2007
Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 Page: 6 of 10

Colorless. Liquid. Acrid odor.

10. Stability and Reactivity

Stability:

This product is stable under normal storage conditions.

Hazardous Polymerization:

Will not occur under normal conditions.

11. Toxicological Information

Chemical Name	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Phenol	340 mg/kg	850 mg/kg	310-316 mg/m ³

Other Toxicological Information:

No information available.

12. Ecological Information

Aquatic Toxicity Data

LC50 (Fish) : 5 mg/l 96h

EC10 (Algae) : 7.5 mg/l 8d

LC50 (invertebrates) : 3.1 mg/l 48h

Behavior in sewage treatment plants

EC50 (communal activated sludge) : 799 mg/l 3h

EC50 (photobacterium phosphoreum) : 18 mg/l 5min

Effects on soil organisms

LC50 (rainworm) : 401 mg/l 14d

13. Disposal Considerations

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number 877-378-7745 (Canada)

Approval Date: January 3, 2007
Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 Page: 7 of 10

Disposal Method:

Waste must be disposed of in accordance with federal, state, and local regulations.

14. Transport Information

U. S. DOT Transport Information

Proper Shipping Name: Phenol solution

Hazard Class: 6.1

Packing Group: II

RQ (lbs.): 1000 (phenol)

I.D. Number: UN2821

ERG Number: 153

Hazard Subclasses: None

Transport Label(s) Required: TOXIC (POISON)

15. Regulatory Information

This product contains the following non-hazardous components:

Water

U.S. Federal Regulations

OSHA:

This document has been prepared in accordance with the MSDS requirements of OSHA Hazard Communication Standard.

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number 877-378-7745 (Canada)

Approval Date: January 3, 2007

Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 **Page: 8 of 10**

Clean Air Act Section 112:

This product contains the following components present at or above the OSHA de minimus level and listed as Hazardous Air Pollutants:

	CAS Number	Wt. %
Phenol	000108-95-2	85-95

This product contains the following components present at or above the OSHA de minimus level and listed as Extremely Hazardous Air Pollutants:

	CAS Number	Wt. %
Phenol	000108-95-2	85-95

SARA Section 302:

This product contains the following components listed as Extremely Hazardous Substances:

	CAS Number	Wt. %
Phenol	000108-95-2	85-95

SARA Section 311/312:

Hazard Classifications: Immediate (acute), Fire

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

	CAS Number	Wt. %
Phenol	000108-95-2	85-95

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number 877-378-7745 (Canada)

Approval Date: January 3, 2007
Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 Page: 9 of 10

TSCA:

This product or its components are listed in or exempt from the TSCA inventory requirements.

This product contains the following non-proprietary substances subject to export notification under Section 12 (b) of TSCA.

	CAS Number	
Phenol	000108-95-2	Reportable one-time

State Regulations

New Jersey:

This product contains the following non-hazardous components subject to disclosure under New Jersey Right-to-Know legislature:
None

Pennsylvania:

This product contains the following non-hazardous components subject to disclosure under Pennsylvania Right-to-Know legislation:
None

California (Proposition 65):

This product contains the following substances known to the State of California to cause cancer:
None

This product contains the following substances known to the State of California to cause adverse reproductive effects:
None

International Regulations

Summary of International Chemical Inventory Status:

INEOS Phenol

Material Safety Data Sheet

24 Hour Emergency Number: 800-424-9300
24 Hour CHEMTREC Number: 800-424-9300 (USA)
703-527-3887 (International)
24 Hour Echelon Number 877-378-7745 (Canada)

Approval Date: January 3, 2007
Revision Number: 4

Phenol Solution

MSDS Number: INEOS Phenol 05 Page: 10 of 10

Canada	On inventory
Europe	On inventory
South Korea	On inventory
Australia	On inventory

16. Other Information

NFPA Ratings: Health – 3 Flammability – 2 Reactivity – 0
Ratings Key: 4 = Highest Hazard, 0 = Lowest Hazard, N = No rating for powders

Key to abbreviations used:

NA	Not Applicable
NAV	Not Available
NE	Not Established
NJTSR No.	New Jersey Trade Secret Registry Number
R	Registered Trademark of INEOS Phenol
TM	Trademark of INEOS Phenol

INEOS Phenol provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. INEOS Phenol makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product which the information refers. Accordingly, INEOS Phenol will not be responsible for damages resulting from use of or reliance upon this information.

MSDS Last Page